Raising the Efficiency of Steel Melting in Arc Furnaces

ing while applying oxygen; F.P. Yedernal, Doctor of Technical Sciences, Professor: The application of oxygen and complex deoxidizers in raising the efficiency of electro-smelting of structural steels; P.Ya. Ageyev, Doctor of Technical Sciences: Factors influencing the rate and the "depth" of deoxidation; K.K. Prokhorenko, Engineer: Improving the technology of electro-steel smelting (in the Izhevsk Plant); V.I. Simonov, Engineer: Experimental work on the melting of ball-bearing and structural steels preceded by "deep" deoxidation and with a shortening of the refining process; A.I. Kholodov, Candidate of Technical Sciences: Raising the efficiency of the reduction period in the arc furnace melting process; A.I. Kondrat'yev, Engineer: Deoxidation and desulfuration of steel in arc furnaces; Yu.A. Shul'te, Doctor of Technical Sciences: How increased efficiency in the electro-smelting process affects the character of non-metallic inclusions in steel; A.M. Levin, Candidate of Technical Sciences: Experience gained in raising the efficiency of the electro-smelting process of structural steels; L.F. Kosoy, Engineer: Improving the melting technology of structural steels; V.M. Zamoruyev, Doctor of Technical Sciences: Raising the efficiency of steel melting by the acid process in arc furnaces; V.B. Rutkovskiy, Engineer: The technology of electro-smelting of ball-bearing and structural steels by treating the metal in the ladle with electro-furnace slags; A.G. Shalimov, Can-

Raising the Efficiency of Steel Melting in Arc Furnaces

didate of Technical Sciences: Refining alloyed steels with synthetic slag; V.A. Chernyakov, Engineer: On the desulfuration during the vacuum treatment of liquid steel; Ye.I. Kadinov, Engineer: Decreasing the losses in chrome with slags during melting 1X18H9T (1Kh18N9T) type steels with the application of AMC (AMS) complex deoxidizer; N.V. Okorokov, Doctor of Technical Sciences: Electromagnetic mixing of steel in arc furnaces. The meeting adopted the resolution that the duplex process (oxygen-converter - electric furnace) should be introduced in the near future in electro-steel foundries, moreover, that similar meetings should be convened annually in various parts of the country. Furthermore, technological recommendations were elaborated and submitted to the responsible authorities on the following subjects: I. Melting of structural steels in carbon-containing charge with the application of oxygen (blown through the charge once during melting and for the second time, after the removal of the melting slag, for a period of 10 - 20 min); II. Melting structural steels (with the exception of tungsten steels) in a charge consisting of alloy scraps (oxygen blowing takes place after melting and after the first sampling without removing the slag at an initial temperature of the metal of 1,480 - 1,520°C. III. Melting of steel from chrome-nickel-tungsten scraps with the use of oxygen. IV. Melting of ball-bearing steel with oxygen. V. Melting of stainless steel with oxygen. Oxygen is

Raising the Efficiency of Steel Melting in Arc Furnaces

blown through the liquid metal when about 20 - 30% of the charge has not yet melted. There are brief summaries and numerical data of all the papers read, as well as of the five technological recommendations mentioned.

Card 4/4

YEDNERAL, F.P., doktor tekhn.nauk

Use of oxygen and complex deoxidizers to accelerate the process of electric smelting of structural steel. Sbor. Inst.stali no.39:49-72 '60. (MIRA 13:7)

1. Kafedra elektrometallurgii Moskovskogo ordena Trudovogo Krasnogo Znameni instituta stali im. I.V.Stalina.
(Steel, Structural--Electrometallurgy)

S/137/61/000/008/010/037
A060/A101

AUTHOR: Yedneral, F. P.

TITLE: Use of complex reducing agents for shortening the deoxidation period in electric smelting of structural steels

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 8, 1961, 35, abstract 8V220 (V sb. "Fiz.-khim. osnovy proizvodstva stali", Moscow, Metallurgizdat, 1961, 137-148)

TEXT: It is recommended that "precipitation" reduction by complex reducing agents be used during the deoxidation period of the smelting, and addition of Fe-Cr be made into the unreduced vat after leading off the oxidizing slag. This technique was tried out upon 25 heats in a 0.5 ton electric furnace, and after that under industrial conditions in the smelting of steel 12 ХНЗА, 45 ХНМФА, and 18 ХНВА (12KhNZA, 45KhNMFA, and 18KhNVA) respectively in 25, 20, and 10 ton electric furnaces. The quality of the steel from these heats was compared with the quality of steel from usual heats carried out with a two-hour reduction period. The reduction period of the experimental heats lasted for 1 hour to 1 hour 20 min. Of the complex reducing agents the following were tested: Si-Mn

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Use of complex reducing agents ...

(73 - 74% Mn and 18 - 20% Si), the alloy MKA (60 - 65% Mn, 16 - 17% Si, and 6 - 7% Al), the alloy MKK(50 - 51% Mn, 28 - 33% Si, 14-17% Ca). After blowing the vat through with O_2, 2 kg/ton of Si-Mn was admixed. After running off the oxidizing slag the furnace was charged with Fe-Cr, triple complex deoxidizer, and slag formers; deoxydation of the slag was carried out by means of coke and powder Si-Ca; the final reduction of the metal was carried out by an admixture of Al into the furnace and of Si-Ca into the ladle. The steel was cast in 2.7 ton ingots. The O, N, and H content of the steel from the experimental and the ordinary heats is practically the same. The more intensive reduction of the vat in the experimental heats ensures a rise in the desulfurization rate and a drop in the S content of the finished metal. The nonmetallic-impurity content in the steel was also reduced, as well as the rejection rate on account of cracks. The mechanical characteristics of the steel from the experimental heats are on the level of the characteristics of the steels smelted according to the usual technique. Use of the new technique makes it possible to raise the productivity of the electric furnaces by 20% and to reduce the electric power expenditure per ton by 15%. See also RZhMet, 1961, 1V275.

Ye. Kalinnikov

[Abstracter's note: Complete translation]

Card 2/2

VINOGRADOV, V.M., inzh.; YEDNERAL, F.P., doktor tekhn.nauk; YEFROYMOVICH, Yu.Ye., kand.tekhn.nauk

Automation of the electric smelting process. Stal' 22 no.11: 1005-1007 N '62. (MIRA 15:11)

1. TSentral'naya laboratoriya avtomatiki i Moskovskiy vecherniy metallurgicheskiy institut.
(Steel--Electrometallurgy) (Automation)

MATSARIN, K.A.; KRASKOVSKIY, S.V.; YEDNERAL, F.P.

Nickel smelting in vacuum. Izv. vys. ucheb. zav.; chern. met. 7 no.1:62-68 '64. (MIRA 17:2)

1. TSentral'nyy nauchno-issledovatel'skiy institut tekhnologii i mashinostroyeniya i Moskovskiy vecherniy metallurgicheskiy institut.

SMOLYARENKO, V.D.; YAKUSHEV, A.M.; YEDNERAL, F.P.

Viscosity of lime-alumina slags with additions of SiO_2, MgO, and Na_3AlF_6. Izv. vys. uchab. zav.; chern. met. 7 no.9: 63-67 '64. (MIRA 17:6)

1. Moskovskiy vechernyy metallurgicheskiy institut.

Source: IVUZ. Chernaya metallurgiya, no. 1, 1964, 62-68

Abstract: [illegible] only traces of aluminum [illegible]

L 27178-65

ACCESSION NR: AP 4009567

YEDNERAL, F.P., doktor tekhn.nauk; YFFROYMOVICH, Yu.Ye., kand.tekhn.nauk; VINOGRADOV, V.M., kand.tekhn.nauk

Mechanization of electric steel smelting connection with its automation. Stal' 24 no.7:617-619 Jl '64. (MIRA 18:1)

SMOLYARENKO, V.D.; YAKUSHEV, A.M.; YEDNERAL, F.P.

Method for measuring the viscosity of molten slags with an electric vibration viscosimeter. Zav. lab. 30 no.8:969-971 '64. (MIRA 18:3)

1. Moskovskiy vecherniyy metallurgicheskiy institut.

SMOLYARENKO, V.D.; YAKUSHEV, A.M.; YEMNERAL F.P.

Density and surface tension of lime-alumina slags with additions of SiO_2, MgO and Na_3AlF_6. Izv. vys. ucheb. zav.; chern. met. 8 no.1:55-60 '65 (MIRA 18:1)

1. Moskovskiy vechernyy metallurgicheskiy institut.

SMOLYARENKO, V.D.; YAKUSHEV, A.M.; YEDNERAL, F.P.

Viscosity and surface properties of synthetic white slag with additions of Al_2O_3, CaF_2 and Na_3AlF_6. Izv.vys.ucheb.zav.; chern.met. 8 no.6:72-77 '65. (MIRA 18:8)

1. Moskovskiy vechernyy metallurgicheskiy institut.

LIFSHITS, A.G.; YEDNERAL, F.P.

Effect of certain alloying elements on the temperature of the beginning of steel solidification. Izv. vys. ucheb. zav.; chern. met. 8 no.9:74-79 '65. (MIRA 18:9)

1. Moskovskiy vechernyy metallurgicheskiy institut.

YEDNERAL, F.P., doktor tekhn. nauk; VINOGRADOV, V.M., kand. tekhn. nauk

Studying principles and problems in the automatic control of physicochemical processes in electric arc furnace steel melting. Stal' 25 no.4:329-333 Ap '65. (MIRA 18:11)

1. Moskovskiy vecherniy metallurgicheskiy institut i TSentral'naya laboratoriya avtomatiki.

VYSOTSKIY, A.N., inzh.; YEDNERAL, M.P., inzh.; TRAKHTENBERG, A.Ye., inzh.

Improve the designs of structures for the gas industry. Stroi. truboprov. 5 no.5:7-8 My '60. (MIRA 13:9)
(Pipelines)

SKAKOV, Yu.A.; MEZHENNYY, Yu.O.; YEDNERAL, N.V.

Defects of packing and segregation in cobalt-base alloys.
Fiz. met. i metalloved. 17 no.5:773-774 My '64.
(MIRA 17:9)

1. Moskovskiy institut stali i splavov.

YEDNERAL, P.P. (Engr)

YEDNERAL, P. P. (Engr) -- " Analysis of Existing Methods of Calculating Necessary Force for Stampings and the Investigation of Questions on Deformations of Metal in a Die for the Sake of Calculating for Comsumptive Energy or Weight of the Dropping Part of the Hammer During Stamping." Sub 22 May 52, Moscow Order of Labor Red Banner Inst of Steel imeni I. V. Stalin (Disseration for the degree of Candidate in Technical Sciences)

SO: Vechernaya Moakva, January-December 1952

Determining the size of edged grooves for hot stamping. Avt.trakt.prom. no.5:25-27 My '53. (MLRA 6:5)

1. Kiyevskiy politekhnicheskiy institut.
(Automobiles--Apparatus and supplies) (Forging)

YEHNERAL, P.P., kandidat tekhnicheskikh nauk.

Developing approximate formulas for determining the weight of the dropping parts of a forge hammer. Vest.mash. 33 no.7:48-52 Jl '53. (MIRA 6:8)
(Forging)

2110 Yedneral, P.P.

Kuznechnoe Delo. Kiev, Gostekhizdat USSR, 1954. 196 s.s. Ill. 20 sm.
(V Pomoshch' Sel' Skomu Stroitel'stvu I Mts) 12.000 EKZ. 5r. -
Bibliogr: s. 194 (15 Nazv) - Na Ukr. Yaz. -
(54-56034) 621.73.(016.3)

PHASE I BOOK EXPLOITATION SOV/5491

Yedneral, Petr Prokof'yevich, and Ivan Georgiyevich Konstantinov

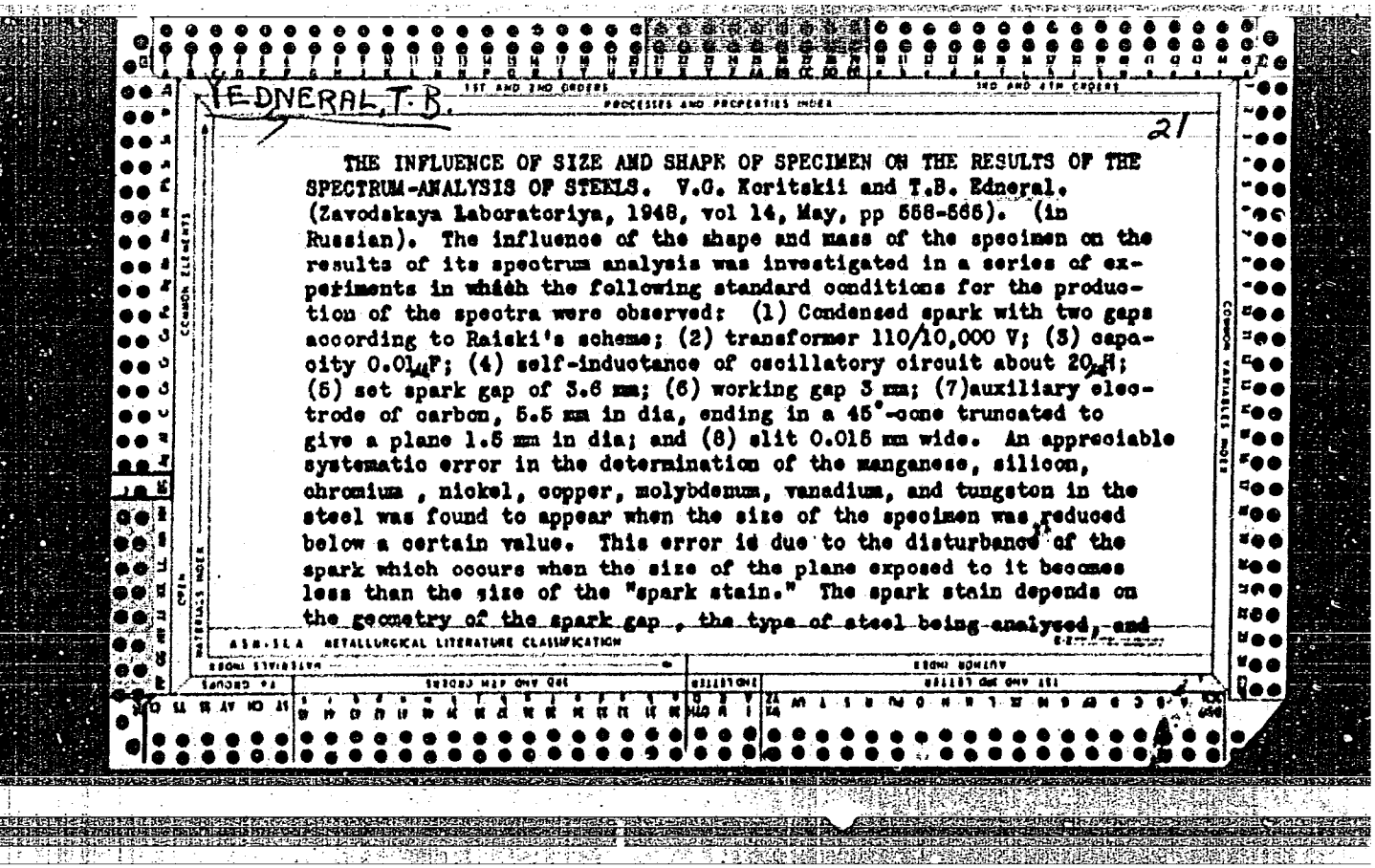
Teoriya plasticheskoy deformatsii i obrabotka metallov davleniyem (Theory of Plastic Deformation and Pressworking of Metals) Moscow, Mashgiz, 1960. 341 p. 13,000 copies printed.

Reviewer: A.I. Serovatin, Engineer; Ed.: G.A. Vinogradov, Candidate of Technical Sciences; Ed.: Yu. P. Pilipenko, Engineer; Tech. Ed.: M.S. Gornostaypol'skaya; Chief Ed. (Southern Dept. Mashgiz): V.K. Serdyuk, Engineer.

PURPOSE: This book is intended for use as a textbook in machine-building tekhnikums.

COVERAGE: The book, written to conform to the requirements of the program "The Theory of Plastic Deformation and Pressworking of Metals", discusses the theory of plastic deformation of metals, theoretical fundamentals of rolling and of other methods of metal forming, the rolling process and roll-pass design, extrusion drawing, open-die forging, die forging, and stamping. No personalities are mentioned. There are 58 references: 57 Soviet and 1 English.

Card 1/10



EDNERAL, T. B.

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THE INFLUENCE OF SIZE AND SHAPE OF SPECIMEN ON THE RESULTS OF THE SPECTRUM-ANALYSIS OF STEELS. V.G. Koritskii and T.B. Edneral. (Zavodskaya Laboratoriya, 1948, vol 14, May, pp 566-566). (in Russian). The influence of the shape and mass of the specimen on the results of its spectrum analysis was investigated in a series of experiments in which the following standard conditions for the production of the spectra were observed: (1) Condensed spark with two gaps according to Raiski's scheme; (2) transformer 110/10,000 V; (3) capacity 0.01 μF; (4) self-inductance of oscillatory circuit about 20 μH; (5) set spark gap of 3.6 mm; (6) working gap 3 mm; (7) auxiliary electrode of carbon, 5.5 mm in dia, ending in a 45°-cone truncated to give a plane 1.6 mm in dia; and (8) slit 0.015 mm wide. An appreciable systematic error in the determination of the manganese, silicon, chromium, nickel, copper, molybdenum, vanadium, and tungsten in the steel was found to appear when the size of the specimen was reduced below a certain value. This error is due to the disturbance of the spark which occurs when the size of the plane exposed to it becomes less than the size of the "spark stain." The spark stain depends on the geometry of the spark gap, the type of steel being analyzed, and

the nature of the generator. For the standard conditions used it was found to vary from 9 mm in dia for low-alloy steels to 12 mm in dia for stainless steels. The reduction of the mass of the specimen below a certain value was also found to cause an appreciable systematic error in the analytical results, this limiting value depending on the thermal characteristics of the metal analysed (its thermal capacity and thermal conductivity) and varying to a certain extent for different elements. The experimental results obtained indicate the need for care in the choice of relative dimensions for standard and specimen used in spectrum analysis. With standards having an effective working plane 10-12 mm in dia, specimens with working planes of diameter 10-12 mm can be analysed, but when the plane of the standard is less than 10 mm in dia only those specimens with a plane of exactly the same diameter can be analysed. For conditions other than those used in this investigation, the numerical values of the above limiting dimensions would be different and should be determined experimentally.—S.K.

Moscow Steel Inst. im. Stalin

YEDNERALOVA, M.B.

Experimental study of the resorption of a neutral suspension from the cavity of the knee joint. Ortop.,trav.i protez. 20 no.10:55-60 O '59. (MIRA 13:2)

1. Iz kafedry normal'noy anatomii (zav. - dots. V.V. Fedyay) Severo-Osetinskogo meditsinskogo instituta.
(KNEE physiology)

YEDOKOVA, I. V.

Treatment of trophic ulcers of the lower extremities. Vest. khir. no.8:104-105 '61. (MIRA 15:3)

1. Iz gospital'noy khirurgicheskoy kliniki (zav. - prof. A.M. Aminev) Kuybyshevskogo meditsinskogo instituta.
(EXTREMITIES, LOWER--ULCERS)

KHARSHAK, Ye.M., dotsent; YEDOSHCHENKO, Ye.A., kand.med.nauk (Kiyev)
ANDRUSHCHENKO, Ye.V., kand.med.nauk; KRAVETS, V.S., kand.med.nauk
(Kiyev); SPIROV, M.S., prof. (Kiyev); SLYUSAREV, A.A., dotsent;
SAMSONOV, A.V. (Donetsk)

Congresses, conferences, meetings. Vrach.delo no.9:151-153 S '62.
(MIRA 15:8)
(MEDICINE--CONGRESSES)

YEDOVIN, Anatoliy Nikolayevich; KHARITONOV, V.Ya., red.

[Using a winch for piling and chuting of logs] Primenenie lebedok na shtabelevke i skatke lesa. Arkhangel'sk, Arkhangel'skoe knizhnoe izd-vo, 1960. 102 p. (MIRA 14:11)
(Winches) (Lumbering)

POLEZHAYEV, Aleksey Aleksandrovich; YEDOVIN, Nikolay Petrovich

[Industry and construction in Archangel Province from 1959 to 1965] Promyshlennost' i stroitel'stvo Arkhangel'skoi oblasti v 1959-1965 godakh. Arkhangel'sk, Arkhangel'skoe knizhnoe izd-vo, 1959. 55 p. (MIRA 14:3)
(Archangel Province--Industries)

YEDOVIN, Yu.I.; UTEKHIN, G.M.

Fluoborite of Central Asia. Dokl. AN SSSR 142 no.3:674-676 Ja '62. (MIRA 15:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologicheskiy institut. Predstavleno akademikom A.G.Betekhtinym.
(Chatkal Range--Fluoborite) (Kurama Range--Fluoborite)

MANVELYAN, M.G.; BABAYAN, G.G.; YEDOYAN, R.S.; VOSKANYAN, S.S.

Investigation of the methods of preparing sodium hydrometasilicate containing five water molecules. Izv. AN Arm. SSR Khim. nauki 13 no.2/3:111-116 '60. (MIRA 13:10)

1. Institut khimii Sovnarkhoza ArmSSR.
(Sodium silicate)

YEDOYAN, R.S.; MANVELYAN, M.G.; BABAYAN, G.G.

Physicochemical studies of the systems containing Na_3AlF_6, K_3AlF_6, and Li_3AlF_6. Part 1: Fusibility diagram of the system Na_3AlF_6--K_3AlF_6. Izv. AN Arm.SSR. Khim.nauki 18 no.1:10-14 '65. (MIRA 18:5)

1. Yerevanskiy nauchno-issledovatel'skiy institut khimii.

YEDRENKIN, S.S.

Oil and gas potentials of Stavropol Territory. Trudy MGI no.22: 78-90 '58. (MIRA 12:4)
(Stavropol Territory--Petroleum geology)
(Stavropol Territory--Gas, Natural--Geology)

YEDRENKIN, S. S.: Master Geolog-Mineralog Sci (diss) -- "The tectonic structure and outlook for oil in Stavropol'". Moscow, 1959. 14 pp (Min Higher Educ USSR, Moscow Order of Labor Red Banner Inst of the Petroleum-Chem and Gas Industry im Acad I. M. Gubkin, Chair of Gen Geology), 150 copies (KL, No 13, 1959, 101)

DIANOV, A.N.; YEDRENKIN, S.S.; CHARYGIN, M.M.

Reservoir rock properties and oil potential of the carbonate sediments of the Bashkirian stage of the Mogutovo and Tverdilovo areas of the Samarkin dislocation. Geol. i geofiz. no.5:56-57 '64. (MIRA 17:9)

1. Moskovskiy ordena Trudovogo Krasnogo Znameni institut neftekhimicheskoy i gazovoy promyshlennosti im. akad. Gubkina.

YEDRENKIN, S.S.

Tectonics of the Stavropol Territory. Trudy MINKHiGP no.25:151-161 '59. (MIRA 15:5)
(Stavropol Territory--Geology, Structural)

YEDRENKIN, YE.I.

KHAMIDULLIN, G.Z., GIMADEYEV, KH.V.; YEDRENKIN, YE.I.; GUBAYDULLIN, M.S.; KHABIROV, M.G.; TRASUNOVA, YE.A.; redaktor; ZAYNULLINA, G.Z., tekhnicheskiy redaktor.

[Problems in long-range planning for collective farms] Voprosy perspektivnogo planirovaniia v kolkhozakh. Pod obshchei red. G.Z.Khamidullina. Ufa, Bashkirskoe knizhnoe izd-vo, 1957. 173 p. (MIRA 10:11)

(Collective farms)

YEDRODOVSKAYA, E. P.

U.S.S.R. / Human and Animal Physiology. Thermoreg- T
ulation.

Abs Jour: Ref Zhur-Biol., No 5, 1958, 22030.

Author : Yedrodovskaya, E. P.
Inst : Not given.
Title : Phosphorus Metabolism in the Liver of Rabbits During Dinitrophenol Hyperthermia and Experimental Fever.

Orig Pub: Fisiol Mekhanismy liknoradochn reakcii, L., Medgiz 1957, 310-314.

Abstract: Following injection of P32 in rabbits, the relative equilibrium between the specific activity (S.A.) of mineral phosphate of the blood and the liver was determined for a period of 12 hours. Following this 1% sol. of alpha-2-4 dinitrophenol was introduced subcutaneously.

Card 1/3

U.S.S.R. / Human and Animal Physiology. Thermoregulation. T

Abs Jour: Ref Zhur-Biol., No 5, 1958, 22030.

Abstract: A definite reduction of all the acid-insoluble phosphorus fractions of the liver as compared with normal S.A. was noted. (Phospholopids by 38%, ribo-nucleinic acid by 23.4%, desoxy-ribonucleicacid by 25%, phospho-proteins by 15%). A slowing of the passage of mineral phosphate from the blood into the liver was also noted, (the S.A. in the blood increased by 41%, decreased in the liver by 30%-) which demonstrates a lowering of the processes of conjugated phosphorylation in the liver. The total exchange of gases increased by 20-30%. In experimental fever, produced by 4 repeated intravenous injections of pyrogen, the total gaseous metabolism remained unchanged,

U.S.S.R. / Human and Animal Physiology. Thermoreg- T
ulation.

Abs Jour: Ref Zhur-Biol., No 5, 1958, 22030.

Abstract: and the phosphorylation processes in the liver increased.

Two mechanisms may underly the increase of the heat balance. 1) The dinitrophenol "type in which the source of increased heat production is in the dissociation of the oxidative and phosphorylation processes; 2) the febrile type in which the temperature elevation is associated not so much with increase of heat production as with decrease of heat loss.

Card 3/3

YEDUNOV, V.I., inzh.

Indicator of shaft inclination. Shakht.stroi. no.1:23 Ja '60. (MIRA 13:5)

1. Trest Tentekshakhtostroy.
(Shaft sinking) (Mine surveying)

ALIYEV, T.M.; ALIZADE, G.A.; YEDUSH, V.Ya.; NABIYEV, M.A.; TER-KHACHATUROV, A.A.

System for teledynamometering the operation of deep pumps. Izv. vys. ucheb. zav.; neft' i gaz 2 no.10:79-86 '59.
(MIRA 13:2)

1.Azerbaydzhanskiy institut nefti i khimii im. Azizbekova i NIPI "Neftekhimavtomat".
(Oil well pumps) (Telemetering)

ALIYEV, T.M.; YEDUSH, V.Ya.; NABIYEV, M.A.; TER-KHACHATUROV, A.A.

Automatic curve-plotting device. Priborostroenie no.1:12-13 Ja '61. (MIRA 14:1)

(Electronic instruments)

ALIYEV, T.M.; YEDUSH, V.Ya.; NABIYEV, M.A.; TER-KHACHATUROV, A.A.

Angular-displacement pickup with a hollow rotor. Izv. AN Azerb. SSR. Ser. fiz.-mat. i tekh. nauk no.3:81-92 '61. (MIRA 14:10)

(Transducers)

ALIYEV, T.M.; YEDUSH, V.Ya.; NABIYEV, M.A.; TER-KHACHATUROV, A.A.

Inductive transducer for dynamometry in oil wells. Izv. vys. ucheb. zav.; neft' i gaz 4 no.12:103-108 '61. (MIRA 16:12)

1. Azerbaydzhanskiy institut nefti i khimii imeni Azizbekova i Nauchno-issledovatel'skiy institut po kompleksnoy avtomatizatsii proizvodstvennykh protsessov v neftyanoy i khimicheskoy promyshlennosti.

ABDULLAYEV, A.A.; ALIYEV, T.M.; ASLANOV, M.M.; YEDUSH, V.Ya.; MAL'YAN, V.M.; NABIYEV, M.A.; TER-KHACHATUROV, A.A.

ChTP-1 remote control and dispatcher control system for beam wells. Azerb. neft. khoz. 40 no.9:39-41 S '61. (MIRA 15:1)
(Oil wells--Electronic equipment)
(Remote control)

S/263/62/000/011/010/022
I007/I207

AUTHOR: Aliyev, T. M., Yedush, V. Ya., Nabiyev, M. A. and Ter-Khachaturov, A. A.

TITLE: Angular displacements transmitter with hollow rotor

PERIODICAL: Referativnyy zhurnal, otdel'nyy vypusk. 32. Izmeritel'naya tekhnika, no. 11, 1962, 22-23, abstract 32.11.169. "Izv. AN Azerb SSR. Ser. fiz.-matem. i tekhn. n", no. 3, 1961, 81-92

TEXT: The theory is outlined of a transmitter-converter of angular displacements into a proportional electromotive force; the magnetic circuit of the transmitter suggested is made of a solid ferromagnetic body Design and performance, according to the description given are not inferior to those of a transmitter whose magnetic circuit is made of steel sheets. The transmitter consists of a thin-walled tubular stator and rotor Two opposite-located grooves for windings are provided both at the internal surface of the stator and the external surface of the rotor. When feeding the stator winding by alternating current, an alternating magnetic field is generated in the air gap of the transmitter and induces in the rotor winding an electromotive force proportional to the position of the rotor. Results are reported on experimental investigation of the new type of transmitter, which is being manufactured by the instrument factory im. Kalinin of the Azerbaidzhan Economic Council. There are 4 figures and 5 references.

[Abstracter's note: Complete translation.]

Card 1/1

YEDUSH, V.Ya.; NABIYEV, M.A.

Designing an induction converter with a movable short-circuited loop. Izm.tekh. no.8:50-53 Ag '62. (MIRA 16:4)
(Converters)

ALIYEV, T.M.; YEDUSH, V.Ya.; NABIYEV, M.A.; TER-KHACHATUROV, A.A.; STANKOVICH, Yu.V., red.; BAGIROVA, S., tekhn. red.

[Teledynamometering of deep well pumps] Teledinamometrirovanie glubinnonasosnykh skvazhin. Baku, Azerbaidzhanskoe gos. izd-vo, 1963. 101 p. (MIRA 16:4)
(Telemetering) (Remote control) (Sucker rods)

YEDUSH, V.Ya.

Inductive converter with movable short-circuited closed loop and solid magnetic circuit. Izv. AN Azerb. SSR.Ser. fiz.-mat. i tekh. nauk no.3:121-131 '63. (MIRA 16:11)

YEDUSH, V.Ya.; DADASHEVA, R.B.

Noncontact induction rheochord with an all steel magnetic circuit.
Za tekh.prog. 3 no.10:6-9 O '63. (MIRA 16:12)

1. Nauchno-issledovatel'skiy i proyektnyy institut "Neftekhimavtomat".

YEDVABNIK, Yu.A.; Prinimali uchastiye: ZAZYAN, S.G.; KARANOVICH, G.I.; SHEVALENKO, I.S.

Study of the operation of a bucket slurry feeder as the regulating organ of a system of automatic control of the feeding of a rotary kiln. Trudy IUzhgiprotsementa no.4:63-78 '63. (MIRA 17:11)

1. Gosudarstvennyy institut po proyektirovaniyu tsementnykh zavodov v yuzhnykh rayonakh SSSR (for all except Yedvabnik).

YEDVABNIK, Yu.A.; YUZEFOVSKIY, Ya.G.

Practices in mastering the operation of the UGK installations for automatic gas analysis at the Belgorod and Novo-Zdolbunor cement plants. Trudy IUzhgiprotsementa no.5:62-85 '63.

(MIRA 17:12)

YEDVABNIK, Yu.A.; GEL'FAND, Ya.Ye.; FINKEL'SHTEYN, I.V.

Automating the milling process in 3 x 14m separator cement mill at the Belgorod Cement Plant. Trudy IUzhgiprotsementa no.6:12-24 '64. (MIRA 17:12)

1. Gosudarstvennyy vsesoyuznyy institut po proyektirovaniyu i nauchno-issledovatel'skim rabotam Yuzhgiprotsement (for Yedvabnik). 2. TSentral'noye proyektno-konstruktorskoye byuro tresta Sevzapmontazhavtomatika (for Gel'fand, Finkel'shteyn).

YEDVABNIK, Yu.A.; IEVIN, L.A.; SHEKHEL', A.Z.

Using algorithms in calculating cement mixes. Trudy IUzhgiprotsementa no.6:35-41 '64. (MIRA 17:12)

AUTHOR: Yedvabnyy, V. I. (Engineer). 97-57-9-13/17

TITLE: Calculation of the Tensioning Loss Due to Friction During the Designing Stage of Prestressed Constructions With Curved Batch Reinforcement . (Uchet poter' natyazheniya ot treniya pri proyektirovanii predvaritel'no napryazhennykh konstruktsiy s krivolineynoy puchkovoy armaturoy).

PERIODICAL: Beton i Zhelezobeton, 1957, Nr.9. pp.373-375. (USSR).

ABSTRACT: Reinforced concrete construction with post-tensioned reinforced cement inserted after the concrete has hardened is widely used at present. It is well known that where the pre-tensioned reinforcement follows the deflection curve, the main stresses are smaller. The curved pre-tensioned reinforcement therefore allows a reduction of the cross-section dimensions. During the tensioning of the reinforcement great friction against the wall affects the tensioning. To facilitate more economical and accurate design of this type of reinforced construction the article gives formulae and tables to define the magnitude of tensioning of bent reinforcement and its pronlongation, with allowance for losses by friction. The mathematical theory is given and the necessary formulae deduced. The magnitude of the friction does not depend, as the given formulae prove, on

Card 1/2

Calculation of the Tensioning Loss Due to Friction During the Designing Stage of Prestressed Constructions With Curved Batch Reinforcement.

the shape of the bent reinforcement. Table 1 gives coefficients of friction of curved batch reinforcement consisting of 2-5 mm diameter wires in contact with various materials. The values of the coefficient of friction and the given formula have been confirmed by F. Leonhardt (Ref 1) in experiments on curves of reinforcement, including a parabola. Table 2 gives values for e^{Ca} where e = the base of the natural logarithm, C is the coefficient of friction and "a" is the "central angle". Table 3 gives values for $\frac{e^{Ca} - 1}{Ca}$. Practical examples of calculations are given. There are 2 Figures, 3 Tables and 1 German Reference.

AVAILABLE: Library of Congress.

1. Concrete-Reinforced-Construction 2. Concrete-Prestressed-Construction 3. Concrete-Prestressed-Tension-Mathematics-Theory

Card 2/2

YEDYGENOV, K.

Building new enterprises and expanding those in operation. Mias. ind.SSSR 31 no.3:30-31 '60. (MIRA 13:9)

1. Gosplan Kazakhskoy SSR.
(Kazakhstan--Meat industry)

YEDYGENOV, K.

Eliminate the serious shortcomings in the operations of the meat industry of Kazakhstan. Mias.ind. SSSR 33 [i.e.34] no.2:26-28 '63.
(MIRA 16:4)

1. Gosplan Kazakhskoy SSR.
(Kazakhstan—Meat industry)

YEDYGENOV, K., CAND VET SCI, "DISINFECTION OF BRUCELLOUS RAWHIDES WITH CHLORAMINE," ALMA-ATA, 1961. (MIN OF AGR KAZSSR. ALMA-ATA ZOOVET INST). (KL-DV, 11-61, 226).

YEDYGENOV K. Ye.

USSR / Microbiology. Microbes Pathogenic for Man and Animals. Bacteria. Brucelli. F-4

Abs Jour: Ref Zhur-Biol., 1958, No 17, 76784.

Author : Yedygenov, K. Ye.; Anan'yev, P. K.
Inst : Veterinary Institute, Kazakh Affiliate, All-Union Academy of Agricultural Sciences imeni I. V. Lenin.
Title : On the Disinfection of Hides Taken from Animals with Brucellosis.

Orig Pub: Tr. In-ta vet. Kazakhsk. fil. VASKHNIL, 1957, 8, 82-84.

Abstract: No abstract.

Card 1/1

YEDYGENOV K. Ye.

COUNTRY : USSR
CATEGORY : Diseases of Farm Animals. R
Diseases Caused by Bacteria and Fungi.
ABS. JOUR. : RZhBiol., No. 3, 1959, No. 12143

AUTHOR : Yedygenov, K. Ye.
INST. : Alma-Ata Zooveterinary Institute
TITLE : Using Chloramine for the Decontamination of Tanned Raw Products.

ORIG. PUB. : Tr. Alma-Atinsk. zoovet. in-ta, 1957, 10, 388-395

ABSTRACT : It was determined that a 1 percent saline solution of chloramine successfully decontaminates skins infected with brucellosis within 30 min and does not reduce the quality of tanned raw products.

Kafedra veterinarnoy ekspertizy s osnovami tekhnologii produktov zhivotnovodstva

CARD: 1/1

YEDYGENOV, K., Ye. vetvrach; RUDCHENKO, V.

Effect of chloramine-B on the quality of raw fur. Mias.ind. SSSR 31 no.1:23-24 '60. (MIRA 13:5)

1. Alma-Atinskiy myasokombinat.
(Alma-Ata--Hides and skins--Disinfection)

ZOTOV, V.P.; SILUYANOV, V.G.; GUGINA, Ye.F.; AUERMAN, L.Ya.; ALEKHINA, M.S.; BEZZUBOV, A.D.; BODROV, V.A.; BUDNYY, A.V.; BURTSEV, Ye.L.; VAYNSHTEYN, V.O.; GAVRILOV, A.N.; GORBATOV, V.M.; GRITSENKO, N.N.; DOLGUSHEVA, L.I.; YEDYGENOV, K.Ye.; ZHURAVLEVA, S.S.; ZACHESKIN, Ya.A.; IVKIN, A.P.; IZOTOV, A.K.; IL'INSKIY, N.A.; IRINARKHOVA, A.M.; KARPENKO, A.K.; LYSOGOR, P.M.; LUPISH, A.T.; OLEYNIKOV, V.V.; ORANZHEREYEVA, V.F.; PETROV, N.A.; PYATIBRATOV, M.A.; ROMANOV, A.N.; RAUBE, P.V.; RYZHENKO, L.P.; SEMYKIN, A.A.; SHEFER, A.P.

G.IA.Ivanov; obituary. NTO 4 no.10:39 O '62. (MIRA 15:9)
(Ivanov, Georgii IAkovlevich, 1897-1962)

YEDYGENOV, N.

Struggle of the Communist Party of the Soviet Union to create a great feed supply. Vest.AN Kazakh.SSR 16 no.3:80-81 Mr '60. (MIRA 13:6)

(Reclamation of land)

RATMANOV, Yu.F., inzh.; YEVDOKIMA, M.P., inzh.

Effect of the mining system on indices of operations in mine sections and mines. Ugol' Ukr. 7 no.10:42-43 O '63.
(MIRA 17:4)

KREMNEV, O.A.; BOROVSKIY, V.R.; YEDZHUBOV, A.A.

Rapid contact drying of fabric. Tekst. prom. 18 no. 7:42-44 Jl '58.
(MIRA 11:7)

(Silk--Drying)

KREMNEV, O.O. [Kremn'ov, O.O.], kand.tekhn.nauk; BOROVSKIY, V.P. [Borovs'kyi, V.P.], kand.tekhn.nauk; YEDZHUBOV, O.A. [IEdzhubov, O.A.], kand.tekhn. nauk.

Rapid drying of textiles. Visnyk AN URSR 2 no.7:47-50 Je '58. (MIRA 11:9)

(Textile fabrics--Drying)

SOV/136-59-6-5/24

AUTHORS: Babina, I.V., Besser, A.D., Alyushin, Ye.I., Lukin, A.N. and Yedziyev, S.S.

TITLE: Roasting of Zinc Concentrates in an Effervescent Bed with Simultaneous Elimination of Lead and Cadmium and Coarsening of Cinder Granules (Obzhig tsinkovykh kontsentratov v kipyashchem sloye s otgonkoy svintsa i kadmiya i ukrupneniyem zeren ogarka)

PERIODICAL: Tsvetnyye metally, 1959, Nr 6, pp 27-32 (USSR)

ABSTRACT: By carrying out roasting of zinc concentrates in an effervescent bed with simultaneous granulation of the cinders and volatilisation of lead and cadmium, it was found that when the speed of air supply to the furnace was increased to 17-20 cm/sec, roasting could be carried out at a bed temperature of 1100 - 1150°C. An examination of the laboratory results was carried out in the reconstructed furnace KS-3. When the furnace was reconstructed for the first time, the hearth area was decreased from 19.3 to 8.4 m^2 and it was given a rectangular shape with a length-to-width ratio of 5.3:1. This made it possible for the mildly oxiding zone in the

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Roasting of Zinc Concentrates in an Effervescent Bed with Simultaneous Elimination of Lead and Cadmium and Coarsening of Cinder Granules

effervescent bed to be extended and thereby favourable conditions to be created for the elimination of lead and cadmium as sulphides (the vapour tension of these metals at the roasting temperature is higher than that of oxides). The decrease of the hearth area was brought about by an extra layer of fireclay brick; vertical brick walls were laid up to a height of 1.2 m and above that followed a slanting layer at an angle of 60° (Figure 1). In the reconstruction of the furnace KS-3, a means for the separation of coarse dust from volatile matter at 750 - 800°C was provided in the form of dust extractors. Experiments carried out in the thus altered furnace have confirmed the laboratory experiments and shown that at 1050 - 1150°C the roasting process goes on steadily, the material is not turned into monolite but a coarsening of the cinder granules and a decrease in dust loss is observed. The work of the lined dust extractors was, however, rendered difficult because of

Roasting of Zinc Concentrates in an Effervescent Bed with Simultaneous Elimination of Lead and Cadmium and Coarsening of Cinder Granules

formation of crust of sulphided dust inside them. However, in the second reconstruction of the furnace, it was decided to see whether it was possible to catch the coarse dust in dust chambers built inside the furnace. To this end, vertical divisions were made of brick inside the furnace. A diagram of the layout of chambers in the furnace is shown in Figure 2. Investigations carried out after the second reconstruction of the furnace have shown that 80% of the dust was caught in the chambers. As a result of the unfavourable position of the gas inlet into the first chambers, the dust loss increased in this series of experiments up to 50% of the total quantity of solid roasting products. The third reconstruction of the furnace (Figure 3) was designed to reduce dust losses by increasing the volume of the furnace above the bed. The hearth area was decreased to 6.6 m^2 and the dust chambers inside the furnace were left out. The slanting part of the furnace was made at an angle of 75 - 80° to the horizontal. The control layout for the

Roasting of Zinc Concentrates in an Effervescent Bed with Simultaneous Elimination of Lead and Cadmium and Coarsening of Cinder Granules

technological parameters of the roasting process is shown in Figure 4. A mixture consisting of zinc concentrates with an addition of Waelz oxides was roasted. The charge contained 46-48% Zn, 27-29% S, 1.1-1.4% Pb, 0.14-0.19% Cd and 10-11% moisture. This was charged into the fore-chamber of the furnace. The cinders were cooled and submitted to further treatment. Investigations were carried out at 950, 1000, 1050, 1150 and 1190°C. At a temperature of above 1000°C, the elimination of Pb and Cd from the cinders proceeded satisfactorily and the amount which was removed increased with increasing temperature of the bed. This dependence is shown in Table 2 and in Figure 5. The reduction of dust removal in relation to the temperature of the process is shown in Figure 6. As a result of their investigations, the authors have arrived at the following conclusions.

1) The method worked out for roasting zinc concentrates enables the output of the effervescent-bed furnace to be

sharply increased and enables cinders to be obtained which are suitable for pyrometallurgical re-treatment in which the sintering stage is left out. The new method also enables the extraction of Pb and Cd to be sharply raised by re-treating sublimates which are enriched with these metals.

2) At a temperature of 1100 - 1190°C the furnace works steadily; the hearth remains free of crusts.

3) In order to cut down the dust losses to a minimum, the furnace must have a considerable volume above the bed which ensures a long stay and a low speed of the gas in the working space of the furnace. The charge must be added directly to the effervescent bed.

4) In order to attain the best elimination of Pb and Cd the furnace must have a rectangular shape with a length-to-width ratio of the hearth of approximately 6:1.

SOV/136-59-6-5/24

Roasting of Zinc Concentrates in an Effervescent Bed with Simultaneous Elimination of Lead and Cadmium and Coarsening of Cinder Granules

There are 6 figures and 2 tables.

ASSOCIATIONS: Gintsvetmet (Babina, I. V., Besser, A. D.)
Belovskiy tsinkovyy zavod (Belovo Zinc Plant) (Alyushin, Ye.I., Lukin, A.N., Yevsdiyev, S.S.)

Card 6/6

YAZIKOV, D. K.

"Intraosseous fixation with a metallic pin in fractures of the long bones" by Ya. G. Dubrov. Reviewed by D. K. Yazikov. Ortop., travm. i protez. no.12:57-58 '61. (MIRA 15:2)

(DUBROV, IA. G.)
(INTERNAL FIXATION IN FRACTURES)
(EXTREMITIES(ANATOMY)--FRACTURES)

YAZIKOV, M.P.

Universal elastic coupling clutch. Mats. predl. na gor. elektrotransp. no.9:84 '64. (MIRA 18:2)

1. Sluzhba puti Tramvayno-trolleybusnogo upravleniya Leningrada.

YAZIKOVA, Ye. G.

138-1-7/16

AUTHORS: Shatalov, V. P; Kostyukov, N. M; Bashkatov, T. V; Yazikova, Ye. G; Chulyukova, T. A; Popova, Ye. N.

TITLE: The Preparation of 1,3-Butadiene--Styrene Rubber With Oil Fillers. (Part 1). Polucheniye maslonapolnennogo divinil-stirol'nogo kauchuka - soobshcheniye 1).

PERIODICAL: Kauchuk i Rezina, 1958, Nr.1. pp. 24 - 27. (USSR).

ABSTRACT: BHИИSK has evolved a method for the addition of mineral oil to latex during the processing of 1,3-butadiene-styrene rubber with oil fillers by determining the requirements of emulsified oils. In the Voronezh Plant for Synthetic Rubber an oil emulsion was added in a continuous manner to the latex stream. CKC-30A with a surface tension not exceeding 38 din/cm was tested. The latex was cooled to a temperature of 25 - 30°C before the oil emulsion was added which, in turn, was also cooled to a temperature of 30°C. Under these conditions coagulation of the latex and the oil emulsion took place after a few minutes. The 1,3-butadiene-styrene rubber CKC-30A was prepared similarly as CKC-30AM, according to a method evolved by A. Ye. Kalaus, M. A. Robinerzon,

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The Preparation of 1,3-Butadiene-Styrene Rubber with Oil Fillers (Part 1).

P. I. Zakharchenko, A. B. Zaytsevaya and M. G. Faynshteyn. The lubricating oil emulsion-18 was added to the latex in an agitator (approximately 150 revolutions/minute). This mixture was coagulated with calcium chloride and acetic acid. Comparative data of physical and mechanical properties of the mixtures CKC-30AM and CKC-30A are given in a Table on page 25. The influence of temperature and surface tension of the latex on the stability of the emulsion was determined. The physico-mechanical properties for CKC-30AM, when using emulsions based on stearic acid and on synthetic fatty acids (from the Shebekinsk Combine) were determined according to ГОСТ (Table 1) Emulsions of oil with ammonia soaps were mixed with latex when cooling to 35-40°C and also at 55-60°C. Rubber containing the lubricating oil emulsion-18 had equally good physical and mechanical properties as rubber prepared with triethanolamine soaps (Table 2). Oil emulsions with ammonia were prepared under identical conditions as with triethanolamine. The soaps were saponified at temperatures of 35-40°C. The oil content of the rubber was 15%, the latex was not cooled before mixing. The surface tension of the

The Preparation of 1,3 Butadiene-Styrene Rubber With Oil Fillers. (Part 1).

latex varied between 37 - 42 dyn/cm and the properties of CKC-30AM prepared from the C_{17}-C_{21} fractions of fatty acids are given in Table 3. It was found that it was not necessary to cool the latex to a temperature of 45 - 50°C, but the temperature of the latex before mixing could reach 55 - 60°C. The stability of the oil-latex emulsion is not improved by decreasing the temperature. Latex with a surface tension up to 43 dyn/cm can be used for the manufacture of the rubber CKC-30AM. Synthetic fatty acid fractions C_{17}-C_{21} can be used for preparing the lubricating oil emulsion-18 together with stearic acid, and ammonia can be used as well as triethanolamine.

Card 3/3

ASSOCIATION: Voronezh Plant SK im S. M. Kirov. (Voronezhskiy zavod SK im S. M. Kirova)

AVAILABLE: Library of Congress.

SHCHERBATENKO, V.V.; MIKULINSKAYA, L.R.; BEGANSKAYA, L.S.; CHERESHKEVICH, L.V.; CHEGODAYEV, D.D.; YAVZINA, N.Ye.; GRINEVICH, K.P.

Investigating the possibility of bread baking in molds coated with polymeric materials. Trudy TSNIIKHP no.10:82-86 '62. (MIRA 18:2)

YAZININA, R.O. [IAzynina, R.O.]

Size of the canning industry enterprises of the Podolian Economic Council. Khar. prom. no.4:77-79 O-D '65. (MIRA 18:12)

YAZIVITSKIY, Y. S., VIZI, I., ZHUKOV, G. P., ZABIYAKIN, G. I., KARZHAVINA Ye. N., Pikelner, L. B., POPOV, A. B., and SHARAPOV, E. I.

"Liquid Scintillation Detectors for Registering Neutrons."

Joint Institute for Nuclear Research, Dubna, USSR.

report submitted for the IAEA conf. on Nuclear Electronics, Belgrade, Yugoslavia 15-20 May 1961

YAZ'KO, Ye.M.

Some genetic features of the Kurumkan deposit established by mineralothermometric analysis. Trudy VNIIP 1 no.2:129-133 '57. (MIRA 12:3)

(Kurumkan--Quartz)

YAZ'KOV, B.

Industrial safety committee at the enterprise. Sov.profsoiuzy 4 no.6:52-55 Je '56. (MLRA 9:8)

1. Tekhnicheskiy inspektor TSentral'nogo komiteta profsoyuza rabochikh lesnoy, bumazhnoy i derevoobrabatyvayushchey promyshlennosti.

(Industrial hygiene) (Industrial safety)

40718
S/117/62/000/009/003/003
A004/A101

1.1400

AUTHOR: Yaz'kov, B. M.

TITLE: Explosion die-forging

PERIODICAL: Mashinostroitel', no. 9; 1962, 30 - 32

TEXT: In the beginning, the author describes the basic principles of explosion die-forging. The effect of the wave of explosion on the blank surface depends not only on the mechanical properties of the material, but also on the ratio between the component dimensions and the wavelength of explosion. Explosion die-forging does not involve essential changes in the microstructure of the material being worked. The shape of the blasting charge is of great importance. The optimum medium for transmitting the pressure is water, since operation in water is safer than in air, the propagation speed of the wave of explosion is 4 - 5 times higher in water than in air and the pressure increases by a factor of 70 compared to air; besides, water absorbs the explosion noise. A detailed description is given of the equipment and technology of explosion die-forging. To increase the explosion reaction time on the part being worked, slow-acting explosives are used.

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S/117/62/000/009/003/003
A004/A101

Explosion die-forging

The die design for underwater-explosion working is shown in a figure. Special attention is given to the safety problems arising in conjunction with this new working method. Concluding, the author evaluates the explosion die-forging method, considering the advantages and drawbacks. He emphasizes the high productivity of this method, the low manufacturing and equipment costs, and the possibility of die-forging intricate shapes. On the other hand, it is pointed out that explosion die-forging can be used for small-batch production only; it is impossible to apply this method on limited space in general workshops. There are 5 figures.

Card 2/2

YAZ'KOV, B.M.

Dies for manufacturing bottoms by explosion techniques. Biul. tekhn.-ekon.inform.Gos.nauch.-issl.inst. nauch.i tekh.inform. no.2:21-23 '63. (MIRA 16:2)
(Dies (Metalworking)) (Explosives in sheet-metal work)

1. Yazkova, K.N.

2. USSR (600)

4. Horses - Diseases

7. Pathological-morphological changes in the liver and spleen of pigeons utilized in a biological test for infectious anemia of horses. Nauch. trudy UIEV 18, 1951.

9. Monthly List of Russian Accessions. Library of Congress, March 1953, Unclassified.

ALEKSANDROV, V.Ya.; YAZKULYYEV, A.

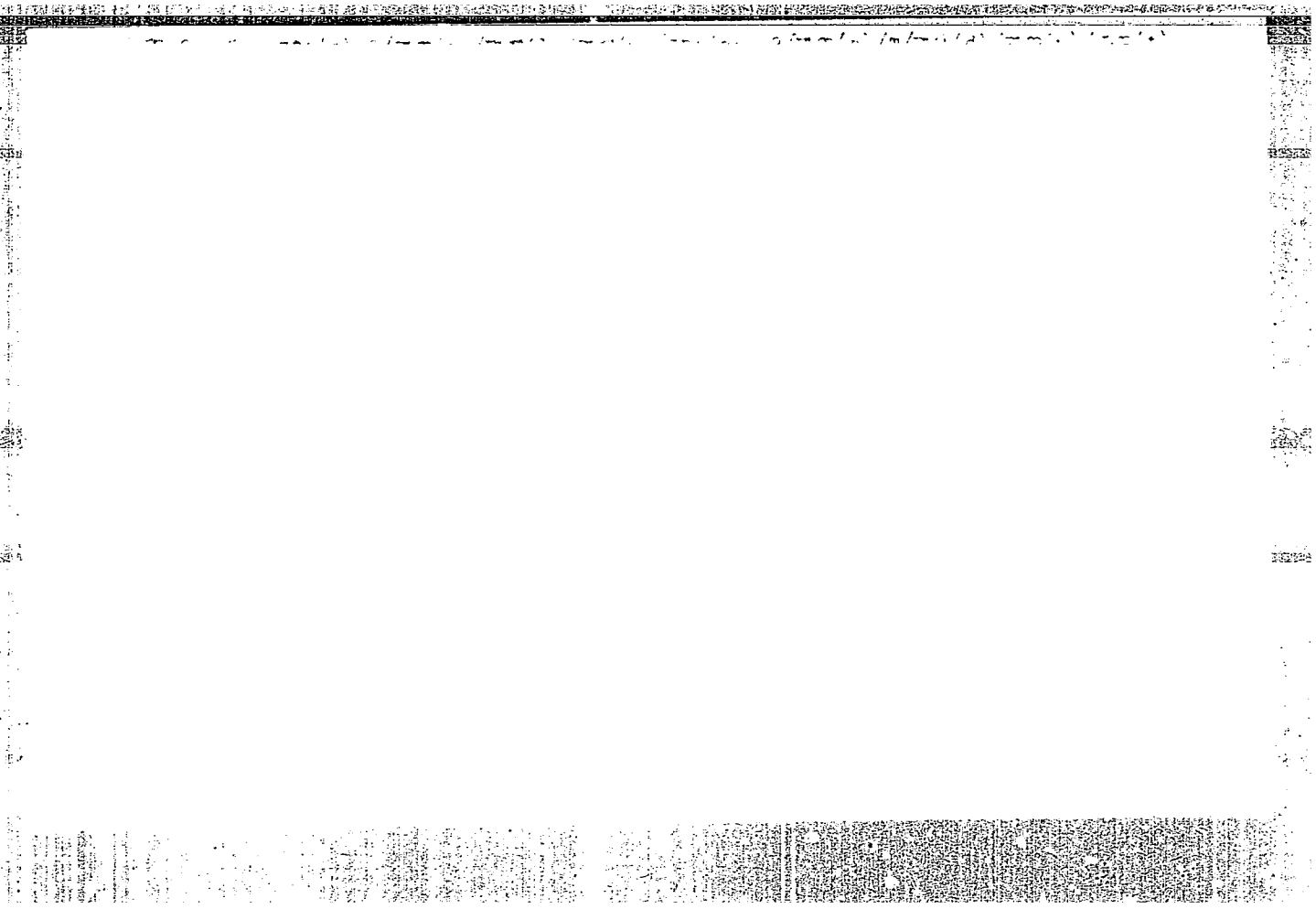
Heat hardening of plant cells under natural conditions. TSitologiia 3 no.6:702-707 '61. (MIRA 14:12)

1. Laboratoriya tsitofiziologii i tsitoekologii Botanicheskogo instituta AN SSSR, Leningrad i Sektor genetiki i tsitologii Instituta botaniki AN Turkmenskoy SSR, Ashkhabad.
(PLANTS, EFFECT OF HEAT ON)

YAZKULYYEV, A.

Comparison of heat tolerance in two species of Hordeum differing in the length of vegetative periods. Bot. zhur. 48 no.12: 1825-1827 D '63. (MIRA 17:4)

1. Institut botaniki AN Turkmenskoy SSR, Ashkhabad.



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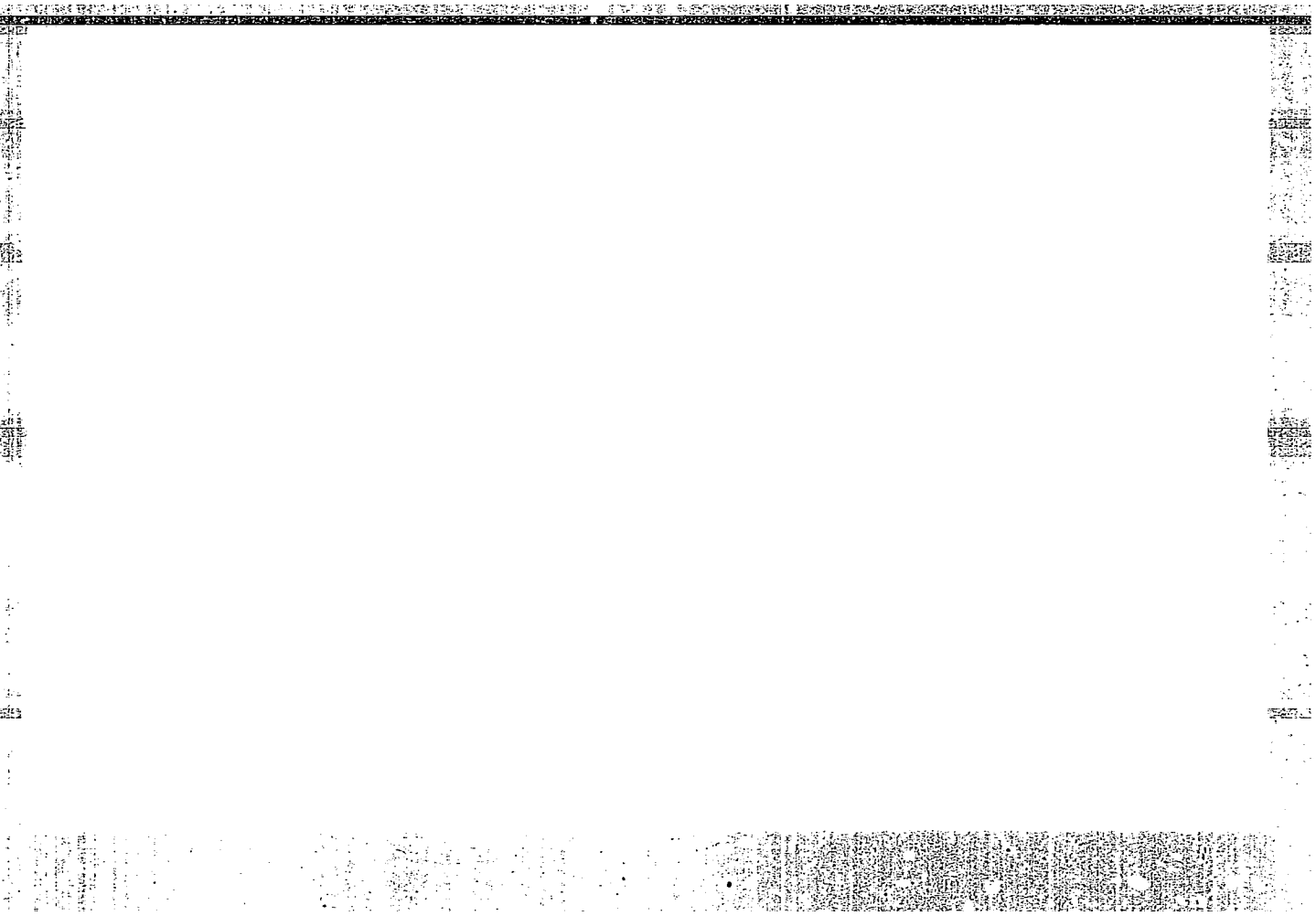

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YAZLIYEV, S.

SOV/137-58-11-23278

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 11, p 205 (USSR)

AUTHORS: Annayev, R.G., Yazliyev, S.

TITLE: Investigation of the Changes in the Thermo-electromotive Force of Nickel-palladium Alloys in Longitudinal and Transverse Magnetic Fields (Issledovaniye izmeneniya termoelektrodvizhushchey sily splavov nikel'-palladiy v prodol'nom i poperechnom magnitnykh polyakh)

PERIODICAL: Izv. AN TurkmSSR, 1957, Nr 6, pp 3-8

ABSTRACT: The investigation of the longitudinal (LT) and transverse (TV) thermomagnetic effect (TE) was carried out on 15 specimens of Ni-Pd alloys containing 0 - 90 atom % Pd. Specimens measuring 20 x 13 x 0.5 mm were annealed at 760°C for 12 hours and slowly cooled at the rate of 100° a day. During the measurement of the transverse TE the magnetic field attained 13,000 oersted, that of the LT attained 5,000 oersted. The temperature difference necessary for creating the effect was 75°. The magnitude of TE was measured on an unbalanced potentiometer. It was possible to measure TE only on alloys containing up to 75 atom % Pd. In alloys containing >70 atom % Pd the longitudinal and transverse Te owing to a

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Turkmen State U. im A.M. Gor'kiy

Investigation of the Changes in the Thermo-electromotive Force (cont.)

strong paraprocessus have the same signs and are about equal in magnitude. A comparatively sharp change in the course of the TE curves is observed close to the stoichiometric Ni_3Pd composition; this is probably caused by the presence of a superstructure.

P. S.

SOV/165-58-6-12/24

AUTHORS: Annayev, R.G. and Yazliyev, S.

TITLE: Determination of the Hall (Kholl) and Nernst Effects on the Alloys of Ferrochrome and Ferromolybdenum (With Weak Chrome and Molybdenum Concentrations)

PERIODICAL: Izvestiya Akademii nauk Turkmenskoy SSR, 1958, Nr 6, pp 93-94 (USSR)

ABSTRACT: The Hall (Kholl) and the transverse thermomagnetic Nernst effects upon the alloys of ferrochrome and ferromolybdenum with weak chrome (to 10.3 weight %) and molybdenum (to 4.8 weight %) concentrations, in their dependency upon an outer magnetic field, were determined for the first time, and it was thereby established that their curves with a constant magnetic field of 15,000 Östred run differently in their dependency upon the molybdenum or chrome content in the alloy with both of these alloy components, whereas with weak magnetic fields the curves in both alloy systems run in a straight line.

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SOV/165-58-6-12/24

Determination of the Hall (Kholl) and Nernst Effects on the Alloys of Ferrochrome and Ferromolybdenum

There are: 1 table, 10 diagrams and 8 references, 3 of which are Soviet, 2 German, 2 American and 1 Japanese.

ASSOCIATION: Turkmenskiy gosudarstvennyy universitet imeni A.M. Gor'kogo (The Turkmenian State University imeni A.M. Gor'kiy)

SUBMITTED: September 20, 1957

Card 2/2

88596

S/078/60/005/011/007/025
B015/B060

18.8100

AUTHOR: Yazliyev, S.

TITLE: Study of the Resistivity of Nickel - Palladium Alloys in the Temperature Range From 0 to 700°C

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol. 5, No. 11, pp. 2440-2445

TEXT: The resistivity of Ni-Pd alloys had already been investigated by E. I. Alizade (Ref. 2), G. Myalikguliyev (Ref. 3), A. I. Shindler, R. I. Smit, and Ye. I. Salkovits (Ref. 4), but not at higher temperatures. The author therefore examined the Ni-Pd system up to 700°C, especially near the composition $NiPd_3$. Experiments were conducted at the Institut metallurgii im. A. A. Baykova AN SSSR (Institute of Metallurgy imeni A. A. Baykov of the Academy of Sciences of the USSR) at A. A. Rudnitskiy's laboratory. 13 wire-shaped specimens (0.8-0.4 mm in diameter) were used for the purpose, and resistivity was measured with a ППТН-1 (PPTN-1) potentiometer. The results obtained (Table 2) show that resistivity rises

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S/078/60/005/011/007/025
B015/B060

Study of the Resistivity of Nickel - Palladium Alloys in the Temperature Range From 0 to 700°C

with temperature. The Curie point was determined by the slope of resistivity curves (Fig. 1) and from the maximum of the temperature coefficient of resistivity (Fig. 6), and represented as a function of the composition of Ni-Pd alloys (Fig. 2). The values agree with those from Ref. 2 and Ref. 4. The isothermal lines of resistivity (Fig. 3) and respective temperature coefficients (Table 5, Fig. 7) are characteristic of a continuous series of solid solutions. The curve of the temperature coefficient of resistivity exhibits a marked peak at the Curie point (Fig. 6), as is the case with the curve of specific heat of metals. The rule set by Matissen, which holds that the value $d\rho/dt$ is independent of concentration, is valid in the total concentration range of Ni-Pd alloys at high temperatures, as is shown by data for $d\rho/dt$ at 450°C (Table 3) and the dependence of the difference $\rho - \rho_0$ on temperature (Table 4) (ρ = resistivity of the alloy, ρ_0 = resistivity of the pure metal). The changes in the curve of the galvanomagnetic (Ref. 3) and thermomagnetic effects (Ref. 1) that were observed in the vicinity of composition $NiPd_3$ could not be established at the curves of resistivity and respective

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